

5 **Listing of Claims:**

1. (original) An imaging optical system for imaging on a predetermined surface information in a region having a length (A) in a long side direction and a length (B) in a short side direction which satisfy a relation of $A/B > 10$, comprising:

10 a diaphragm;

 a first set of a plurality of curved reflection surfaces arranged on an object surface side from the diaphragm; and

 a second set of a plurality of curved reflection surfaces arranged on an image surface side from the diaphragm,

15 wherein an optical path of a light beam passing through a center of the diaphragm and a center of an image obtained through the imaging is deflected by the reflection surfaces within a surface substantially perpendicular to the long side of the region to undergo crossing at least once.

20 2. (original) An imaging optical system according to claim 1,

 wherein the crossing of the optical path is caused on the object surface side from the diaphragm.

 3. (original) An imaging optical system according to claim 1,

25 wherein all the reflection surfaces satisfy a conditional expression:

$$|P|S < 0.5$$

where P (mm^{-1}) represents a power within a surface perpendicular to the long side

5 direction and S (mm) represents a distance from the reflection surface to a subsequent optical surface along a reference axis.

4. (original) An imaging optical system according to claim 1,
wherein the number (X) of reflection surfaces included in the first set of the
10 plurality of curved reflection surfaces and the number (Y) of reflection surfaces included in the second set of the plurality of curved reflection surfaces satisfy a relation:

$$0.65 < X/Y < 1.6.$$

15 5. (original) An imaging optical system according to claim 1,
wherein the crossing of the optical path is caused on both the object surface side and the image surface side from the diaphragm.

6. (original) An imaging optical system according to claim 1,
20 wherein optical powers applied by the reflection surfaces of the imaging optical system to the long side direction of the imaged region are all positive.

7. (original) An imaging optical system according to claim 1,
wherein an intermediate image is not formed in the optical path.

25 8. (currently amended) An image reading apparatus comprising:
the imaging optical system according to ~~any one of claims 1 to 7~~ claim 1;

5 and

a line sensor arranged substantially in an image surface position of the imaging optical system and adapted to convert a formed image to an electrical signal.

10 9. (new) An image reading apparatus comprising:

the imaging optical system according to claim 2; and

a line sensor arranged substantially in an image surface position of the imaging optical system and adapted to convert a formed image to an electrical signal.

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10. (new) An image reading apparatus comprising:

the imaging optical system according to claim 3; and

a line sensor arranged substantially in an image surface position of the imaging optical system and adapted to convert a formed image to an electrical

20 signal.

11. (new) An image reading apparatus comprising:

the imaging optical system according to claim 4; and

a line sensor arranged substantially in an image surface position of the

25 imaging optical system and adapted to convert a formed image to an electrical signal.

5 12. (new) An image reading apparatus comprising:
the imaging optical system according to claim 5; and
a line sensor arranged substantially in an image surface position of the
imaging optical system and adapted to convert a formed image to an electrical
signal.

10 13. (new) An image reading apparatus comprising:
the imaging optical system according to claim 6; and
a line sensor arranged substantially in an image surface position of the
imaging optical system and adapted to convert a formed image to an electrical
15 signal.

 14. (new) An image reading apparatus comprising:
the imaging optical system according to claim 7; and
a line sensor arranged substantially in an image surface position of the
20 imaging optical system and adapted to convert a formed image to an electrical
signal.